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# BULLETIN

American Society of Hospital Pharmacists



# American Society of Hospital Pharmacists

*Affiliated With The*  
**American Pharmaceutical Association**

## CONSTITUTION

**Article I.—NAME.** The name of this organization shall be The American Society of Hospital Pharmacists.

**Article II.—OBJECTIVES.** The objectives of the Society shall be to improve and extend the usefulness of the hospital pharmacist to the institution he serves, to the members of the other health professions with whom he is associated, and to the profession of pharmacy by:

**FIRST**—Establishing minimum standards of pharmaceutical service in hospitals, in order to provide benefits and protection for the public health which it will receive by the skill and art of qualified hospital pharmacists; and to insure for the future an adequate supply of such qualified hospital pharmacists by providing a standardized hospital training for four-year pharmacy graduates who have elected a specialized hospital pharmacy course.

**SECOND** — Providing for interchange of information among pharmacists by encouraging initiative in the development of new pharmaceutical techniques, and by maintaining a close pharmaceutical contact between hospital pharmacists and those engaged in general pharmaceutical practice.

**THIRD**—Aiding the medical profession in extending the economic and rational use of medicaments.

### Article III.—MEMBERSHIP

**Section 1. (a)—ACTIVE MEMBERS** of this Society shall be registered pharmacists in good professional standing, who are members of the American Pharmaceutical Association and whose practice has been essentially connected with hospitals, clinics and dispensaries for a period of one year.

(b) **HONORARY MEMBERS** may be elected from among the individuals who are especially interested in hospital practice. Honorary members shall not pay dues, nor shall they be eligible to vote or to hold office.

(c) **ASSOCIATE MEMBERS** may be elected from among individuals other than hospital pharmacists, who, by their work in the health services, the teaching of prospective hospital pharmacists, or otherwise contributing to hospital pharmacy, make themselves eligible to membership. Associate members shall not be entitled to hold office or to vote. Associate members should be members of the American Pharmaceutical Association.

**Section 2.**—Applications for membership shall be received by the Committee on Membership and shall be acted upon by the Executive Committee on the recommendation of said Committee on Membership.

**Article IV.—OFFICERS.** The officers of this Society shall be a Chairman, a Vice-chairman, a Secretary, and a Treasurer, all of whom shall be elected annually, and none of whom, with the exception of the Secretary and Treasurer, may hold office for more than two consecutive terms.

**Article V.—AMENDMENTS.** Every proposition to alter or amend this Constitution shall be made by two members at an annual meeting of the Society and shall be voted upon by ballot of the members of the Society by mail at least one month subsequent to the annual meeting. All ballots to be eligible for voting must be post-marked within thirty (30) days of the date of the ballot.

## BY - LAWS

**Chapter I.—ELECTION OF OFFICERS.** At the first session of each annual meeting of this Society, the Chairman shall appoint a committee of three members who shall submit nominations for each office of the Society for the ensuing year. The Committee shall present its nominations at the final session of the annual meeting at which time additional nominations may be made from the floor. They shall be voted upon by ballot of the members of the Society by mail at least one month subsequent to the annual meeting. All ballots to be eligible for voting must be post-marked within thirty (30) days of the date of the ballot. A majority of such votes cast shall constitute election.

### Chapter II.—DUTIES OF OFFICERS:

**Article 1.—CHAIRMAN and VICE-CHAIRMAN.** The Chairman, or in his absence, the Vice-chairman, shall preside at all meetings. He will appoint all committees not otherwise provided for and shall be ex-officio member of all committees. He shall prepare a Chairman's address to be presented at the first session of the annual meeting of the Society following his installation.

**Article 2.—SECRETARY.** The Secretary shall keep minutes of the sessions of the Society and maintain a roll of its members. He shall notify individuals of their appointment to committees, notify members of the time and place of all meetings, and conduct the correspondence of the Society. He shall present a written report of his work to the annual meeting of the Society. He shall collect the dues of the members.

**Article 3.—TREASURER.** The Treasurer shall receive and keep account of all moneys received by the Society in the form of dues or remittances and shall disburse them at the direction of the Executive Committee or at the direction of the Finance Committee.

**Chapter III.—EXECUTIVE COMMITTEE.** The Executive Committee shall consist of the Officers of the Society and the Chairman of each standing committee. It shall meet on the call of the Chairman of the Society, shall have supervision over the expenditure of all funds of the Society, and shall be empowered to act for the Society during the period between annual meetings.

**Chapter IV.—FINANCES.** The membership dues of this Society shall be three dollars (\$3.00) per year, payable January first of each year. Accepted regional groups consisting of twenty (20) or more members, or local groups consisting of ten (10) or more members shall collect dues for the American Society of Hospital Pharmacists. These groups may apply to the Executive Committee for refund in the amount of one dollar (\$1.00) per year for each active or associate member. Refunds shall be paid within sixty (60) days after payment to the American Society of Hospital Pharmacists. This amendment is retroactive to January first, 1944.

**Chapter V.—STANDING COMMITTEES.** There shall be five standing committees of the Society; each consisting of three members appointed by the Chairman of the Society, with the approval of the Executive Committee.

**Continued inside back cover.**

# THE BULLETIN

OF THE



Volume 3 - May - June - No. 3

THE BULLETIN is published bimonthly by the American Society of Hospital Pharmacists, a national organization devoted to the profession of hospital pharmacy, dedicated to the interests of the hospital pharmacist, and pledged to co-operate with the American Pharmaceutical Association with which it is affiliated.

Contributions of articles by hospital pharmacists, or by others interested in the progress of this important branch of the public health profession, will be accepted if they are of general interest to the hospital pharmacist. The editors reserve the right to revise all material submitted, if necessary.

Manuscripts submitted for publication should be typewritten in double spacing on one side of paper 8 1/2 x 11". Whenever possible a photograph, drawing, or printed form to illustrate the topic that is discussed in the article should be included.

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# Correspondence



Sirs: We have many occasions to administer phenobarbital sodium by intramuscular injection - usually 5 grains per dose. It would facilitate matters if we had a stock solution. Aqueous solutions are unstable, but I notice that propylene glycol is being used as a solvent in such instances.

I would like to prepare the phenobarbital sodium in 10 cc. vials containing 5 grains per cc. Can such a solution in propylene glycol be safely used? What is the best method of sterilization? Any other suggestions as to solvent or method of preparation of such a solution will be greatly appreciated.

Elias Schlossberg

Arizona State Hospital  
Phoenix, Arizona

A stable solution of sodium phenobarbital for injection may be prepared by using propylene glycol as a vehicle. The finished solution contains 320 mgs. in 2 cc. This solution is intended primarily for intramuscular injection, although it has been given intravenously without any untoward reaction. The formula is as follows:

Sodium phenobarbital	32.4 grams
Benzyl alcohol	4.0 cc.
Propylene glycol	120.0 cc.
Sterile distilled water, to make	200.0 cc.

Boil the pyrogen-free water to be used to remove the carbon dioxide. Cool the water. Dissolve the above listed ingredients. Filter through a bacterial filter and fill into sterile 5 or 10 cc. serum vials. Aseptic technique must be used throughout since sodium phenobarbital is decomposed by heat.

If you are interested in making an injection of sodium pentobarbital, may I suggest that you refer to the May-June, 1945, issue of THE BULLETIN of the American Society of Hospital Pharmacists, page 77.

Sirs: I am sending you my money order for \$8.00 for my membership in the American Society of Hospital Pharmacists, and also my membership in the American Pharmaceutical Association, including the Practical Journal. Please send them to the address below. With my best wishes for the success of the Society during this year.

Leo Collins

9th Station Hospital  
A.P.O. 1051, c/o P.M.  
San Francisco, Calif.

Sirs: I am enclosing eight dollars to join your American Society of Hospital Pharmacists and the American Pharmaceutical Association of which I was a member

a few years back. I would like to be come a member of both societies.

Sara W. Carmody

18 Bleecker St.  
Jersey City, N.J.

Sirs: Have intended to join the Hospital Pharmacists for a long time but have neglected to sit down and write a check. Enjoy the bulletin so much and hope I will be able to attend the Institute.

Mary K. Keenan

St. Mary's Hospital  
Duluth 5, Minnesota

Sirs: I am mailing my application today for the Institute on Hospital Pharmacy. I want to take this time to congratulate you on your good work and assure you of my cooperation in any way possible. I have received the wholehearted cooperation of our Board of Trustees and Executive Committee who manage this hospital showing proof of the results already obtained from our efforts.

The recent bulletin of the American Society of Hospital Pharmacists with the article on Benadryl was very gratefully received here, so very much that I lost my issue to a doctor. If possible could you send me a duplicate copy.

It was very pleasant to become acquainted with John Zugich at a fine meeting in Jacksonville at the Southeastern Hospital Conference.

(Mrs.) Anna D. Thiele

Jackson Memorial Hospital  
Miami 36, Florida

Sirs: I understand the A.S.H.P. will supply reprints of the papers published in the journal Hospitals on the various phases of hospital pharmacy and I would be very glad to receive them and to pay for same if you would be good enough to advise me as to cost.

Mary Mooney

Misericordia Hospital  
Winnipeg, Manitoba

As soon as the series on hospital pharmacy now running in the Journal, Hospitals, is finished, the articles will be reprinted in booklet form by the American Hospital Association and mailed to the members of the American Society of Hospital Pharmacists.



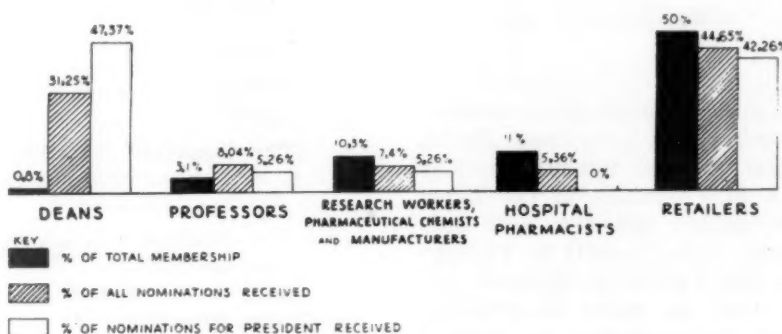


# EDITORIAL

## HOSPITAL PHARMACY'S REPRESENTATION IN THE AMERICAN PHARMACEUTICAL ASSOCIATION

Neither democratic nor fair recognition has been given to hospital pharmacists by the American Pharmaceutical Association through its governing body, the House of Delegates, in the selection of candidates for office. Comprising the second largest group within the Association, the hospital pharmacists have been relegated to a less than minor role by the House of Delegates when nominations are made for the national officers and membership on the Council.

The following table shows by classification the number of nominations made for officers and members of the Council at the last six conventions of the American Pharmaceutical Association.



The chart shows that hospital pharmacists who comprise over ten per cent of the membership of the American Pharmaceutical Association received only four out of 112 nominations, or less than 3.5 per cent. Not one hospital pharmacist was nominated for president during this period.

In contrast, deans who make up less than one per cent of the Association, received a total of 35 nominations out of a possible 112, or over 31 per cent. During this six year period 9 of the 19 nominees for president were deans, a total of over 47 per cent from a group representing less than one per cent of the membership.

The present system of nominating for major offices deans or deans and teachers one year, and usually retail pharmacists the next year, with only an occasional hospital pharmacist, manufacturer or research worker on the list is not justified because it does not properly represent the membership of the American Pharmaceutical Association. Only the retail pharmacists who comprise approximately 50 per cent of the membership has anything like an equitable distribution of nominees - 50 out of a possible 112 or about 45 per cent.

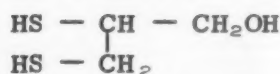
To insure a more equitable distribution of responsibility within the Association the House of Delegates should periodically nominate three hospital pharmacists as president, or for membership on the Council. There is no reason to perpetuate the current practice of passing over those in hospital pharmacy - and there are several reasons for not doing so.

# DIMERCAPROL

## "BAL"

The compound, 2,3-dimercaptopropanol (British anti-lewisite, BAL), developed during the war as an antidote to the arsenical blister gases, was first intended for the local decontamination and treatment of the skin and eyes. However, it was subsequently found to be effective in the treatment of severe mercury and arsenic poisoning. Its use in arsenic poisoning is of special interest in relation to the continuing use of arsenicals in the treatment of syphilis. In addition, BAL should be a valuable drug for use in the treatment of other types of arsenic poisoning and in mercury poisoning.

### CHEMISTRY



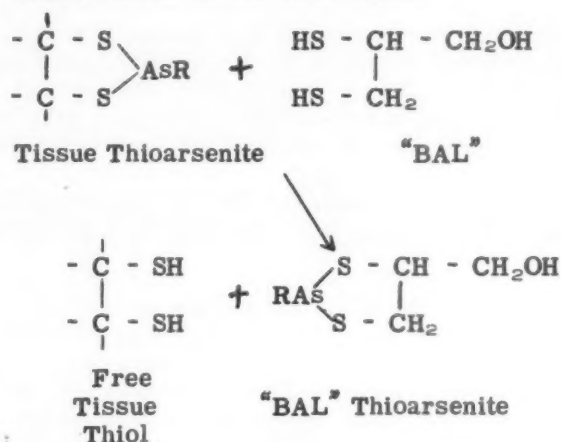
Chemically, BAL is 2,3-dimercaptopropanol. Although unstable in water and propylene glycol, it is stable in peanut oil and benzyl benzoate and may be sterilized in a mixture of the latter solvents, using glass-sealed ampules, with only a slight loss in activity. The Council on Pharmacy and Chemistry of the American Medical Association has urged that the more descriptive, non-proprietary name, Dimercaprol, be adopted in place of the term BAL.

BAL-in-oil ampules 4.5 cc., containing BAL 10 per cent, benzyl benzoate 20 per cent in peanut oil, may be purchased from Hynson, Wescott and Dunning, Inc., Baltimore 1, Maryland.

### PHARMACOLOGY

BAL possesses the ability to remove arsenic and mercury which has become bound to body cells. The toxicity of arsenicals and mercurials is due to the fact that they combine with, and block the function of physiologically essential groupings in the body cell, specifically of cellular -SH groups which are associated with enzyme proteins. For instance the -SH groups in keratin combine with arsenic to form a stable 5-membered ring. In a similar manner arsenic and mercury combines with and inactivates tissue enzyme proteins containing the -SH grouping. BAL, a dithiol, competes with these cell constituents for the heavy metal, and in the case of arsenic, forms a very stable combination, thus

permitting the removal of arsenic from the tissues. The excretion of the BAL thioarsenite combination is very rapid so that the body is quickly freed of the toxic agent.



### The Reaction Between BAL and Tissue Thioarsenite

### DOSAGE

BAL-in-oil should be given only by intramuscular injection. It has been found that the widest margin of safety between toxic levels and the effective dose is provided by injections repeated at four-hour intervals. Further, a single injection of BAL is followed by an increased urinary excretion of arsenic for a period of 2 to 4 hours.

The recommended dosage for milder cases of arsenic poisoning is 2.5 mg. per kilogram of body weight. This dose is repeated at four-hour intervals for a total of 4 to 6 injections on each of the first two days and the same dose is given twice on the third day. The dosage may then be reduced to one or two injections daily for a total period of 10 days, or until recovery is complete. According to this schedule a patient weighing 70 kilograms would receive 175 mg. of BAL, or 1.75 cc. of the 10 per cent solution of BAL-in-oil at each injection.

For more severe cases of arsenic poisoning the recommended dosage is 3 mg. per kilogram. Using this dosage, a 70 kilogram patient would receive 210 mg. of BAL or 2.1 cc. of the 10 per cent solution-in-oil every four hours for

the first two days - 6 injections per day. Four injections would be given on the third day and injections twice daily thereafter for 10 days, or until complete recovery.

In the treatment of mercury poisoning larger doses of BAL are used. The initial dose is usually 5 mg. per kilogram followed in one or two hours by a dose of 2.5 mg. per kilogram. After a lapse of two to four hours a second dose of 2.5 mg. per kilogram should be given within the first twelve hours of therapy. On the second day two-2.5 mg. per kilogram doses may be given, and on the third day one 2.5 mg. per kilogram dose may be administered.

#### SIDE EFFECTS AND TOXICITY

Doses of 2.5 to 3 mg. per kilogram may be injected intramuscularly with only a temporary local discomfort at the site of injection, and with transitory and unimportant subjective reactions in a small proportion of cases. When the dosage reaches 4 or 5 mg. per kilogram the incidence and severity of toxic reactions increases markedly. In order of decreasing frequency, the symptoms consist of nausea, vomiting, and headache; a burning sensation of the lips, mouth, throat and eyes, sometimes with accompanying lacrimation or salivation and pain in the teeth; generalized muscular aches with burning and tingling of the extremities; and a sense of constriction in the chest, with a feeling of anxiety; there is also frequently an elevation in the systolic and diastolic blood pressure. These reactions regularly subside in 30 to 90 minutes.

#### CLINICAL RESULTS WITH BAL

A large proportion of the first cases treated with BAL were patients observed and treated at the rapid treatment centers of the Public Health Service. The results of these cases indicate the necessity for both prompt and adequate treatment.

**Toxic Encephalitis** - In 55 cases of "hemorrhagic encephalitis" caused by intensive arsenotherapy, 40 were either convulsing or in coma at the time of administration of BAL. Forty-four cases recovered within 1 to 7 days, usually with definite improvement within 1 to 3 days. In the group of 11 who died, treatment was delayed for 9 to 72 hours after the onset of convulsions or coma in 9 of these.

**Arsenical Dermatitis** - In 88 cases of arsenical dermatitis, of which 51 were typical exfoliative cases, the administration of BAL usually stopped the progression of the inflammatory reaction and accelerated the healing process. The average time for definite improvement in the

exfoliating cases which responded to treatment (80 per cent) was 3 days, and the average time for almost complete recovery was 13 days. The only serious complication of BAL therapy occurred in treating this group, 5 of whom developed gluteal abscesses or cellulitis at the site of injection. This complication did not occur in other types of arsenic poisoning, and was probably referable to infection carried along with the needle in going through the inflamed and infected area.

**Blood Dyscrasias** - In 10 of 11 cases of arsenical agranulocytosis, the administration of BAL was followed by an increase in the total white blood cell count, and an even more pronounced increase in the proportion and number of polymorphonuclear leukocytes. This was usually apparent within 2 days, and the white count approached normal levels within 7 days.

**Jaundice** - Although the role of arsenic in postarsenical jaundice has not been determined, the response of 5 of the 14 cases treated with BAL was so prompt as to suggest that BAL may have been responsible for the observed response.

**Massive Overdosage of Mapharsen** - Three patients who were, in error, given 400 to 600 mg. of mapharsen received prompt and adequate treatment with BAL with complete disappearance of toxic symptoms. One patient who received 1200 mg. of mapharsen received inadequate treatment with BAL (3 injections of 150 mg. each) and eventually died after an initially favorable response.

**Arsenical Fever** - Forty-four patients who developed a febrile reaction as a complication of arsenotherapy (in 15 associated with a toxic rash) promptly recovered after the administration of BAL.

**Mercury Poisoning** - Twenty-five of 26 patients with acute mercury poisoning survived following treatment with BAL. Eight patients who swallowed not more than 0.5 gram of mercury bichloride recovered within two to three days. Six of the 7 patients swallowing 1 gram of mercury bichloride recovered. Ten patients swallowed from 1.5 to approximately 20 grams of mercury bichloride, and all recovered.

#### References

1. Eagle, Harry: The Systemic Treatment of Arsenic Poisoning With BAL (2,3-Dimercaptopropanol), J. Ven. Disease Inform., 27:114 (May) 1946.
2. Report of The Council on Pharmacy and Chemistry: "BAL" (British Anti-Lewisite) in The Treatment of Arsenic and Mercury Poisoning, J.A.M.A., 131:114 (July 6) 1946.

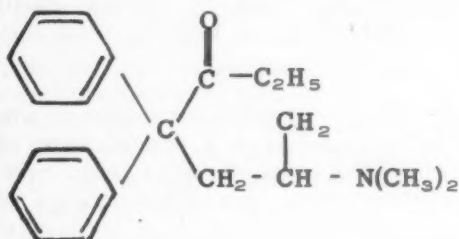


# Therapeutic Trends

New Trends in Medicine and Pharmacy Include A NEW ANALGESIC AGENT - ANTHALLAN - RUTIN - DFP - MUSTARD GAS.

## A NEW ANALGESIC AGENT - 10820

A new chemical showing marked analgesic action is believed to be at least equal to morphine and superior to demerol according to a preliminary report by Scott and Chen of Eli Lilly Company. Chemically, 1,1-diphenyl-1-(dimethyl-amino-isopropyl)butanone-2, this new drug was originally prepared by German chemists and is known by the German serial number 10820 or as the butanone derivative.



This new chemical is a white crystalline compound, soluble in water and alcohol, insoluble in ether and has a bitter taste. In the pharmacological studies on dogs the effects of 10820 closely resembled those of morphine. Marked sedation was present during the peak of analgesia and there was salivation and ataxia. Unlike morphine, 10820 did not cause vomiting.

In the clinical studies 30 patients were given 10820 for pain of various etiology. Pain was effectively relieved in 80 per cent of all cases after giving from 2.5 mg. to 5 mg. of the compound orally every 3 or 4 hours. Analgesic action was noted in patients with malignant tumors, postoperative pain, in myalgia, dysmenorrhea, headache, and toothache. In 2 cases of gangrene, no relief occurred. Side-effects included nausea



which was most frequent, occasional vomiting, headache, dryness of the mouth, lightheaded feeling and pallor. However, no severe side-actions were encountered. At this time 10820 is still an experimental drug and has not been released for commercial distribution.

## ANTHALLAN

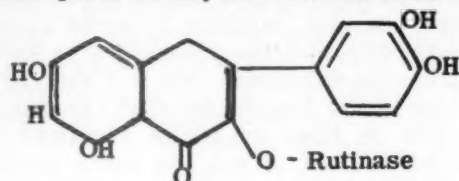
In treating 108 cases of seasonal and non-seasonal hyperesthetic rhinitis with anthallan, impressive results were obtained according to Alexander D. Ghiselin, Jr. M.D., Presbyterian Hospital, New York City. Of the 42 patients selected for a course of anthallan treatment at the Columbia University Presbyterian Hospital Medical Center, about 36 per cent of the patients expressed complete relief and improvement of 70 per cent or more occurred in 56 per cent of the cases. The average period of treatment was 21 days, 6 capsules (0.085 Gm. each) being administered daily during the first week and 3-12 capsules during subsequent weeks according to the clinical response. The fact that patients noted a beneficial effect comparable to the improvement shown at the end of the anthallan period after the drug had been discontinued for 7 weeks, adds to the value of anthallan.

Anthallan is believed to act by decreasing the threshold of sensitivity to histamine. However, this property alone does not explain sufficiently its action in the treatment of hyperesthetic rhinitis. The drug is practically non-toxic, the lethal dose being many times that of the therapeutic dose. Anthallan was developed by the Research Division, Medico Chemical Corporation of America, New York City.

## RUTIN

Rutin, a new drug for the treatment of increased capillary fragility, is a crystalline glucoside of quercetin derived from many common

flowers and leaves including buckwheat leaves and blossoms, tobacco leaf, rue herb and tomato stems. Chemically, rutin is a derivative of flavone which forms citrin. This factor in combination with vitamin C is believed to regulate vascular permeability and has been named vitamin P.



Administering rutin to a series of patients showing increased capillary fragility under a variety of circumstances, its action appeared to be equal to or possibly superior to that shown by members of the hesperidin (one of the glucosides of flavone) group according to a report in *The American Journal of The Medical Sciences*. The dosage of rutin used in the experimental studies was 20 mg. 3 times daily. A few patients who did not respond to this dosage were given 40 mg. three times daily. It is concluded that rutin appears to be of value in: (1) preventing vascular accidents in patients with hypertension; (2) maintaining normal capillary fragility, and hence the avoidance of vascular accidents in patients being treated with thiocyanate; (3) controlling pulmonary bleeding when no other cause is apparent.

#### DFP

Di-isopropyl-fluorophosphate, called DFP for short, may help patients suffering from glaucoma and may lead to better understanding of and treatment of myasthenia gravis, was reported at a recent meeting of the Federation of American Societies for Experimental Biology in Atlantic City.

DFP, originally believed to be useful as a war gas, was found to help patients with glaucoma who had not been helped by physostigmine or pilocarpine, the usual medicines for this disease. Also, this new chemical kept tension in the eyes normal and prevented further loss of visual fields. DFP has a much longer lasting action than pilocarpine or physostigmine and consequently, has to be dropped into the eyes only once a day in the majority of cases. Though not all glaucoma-affected eyes were helped by DFP and in some instances this new chemical gave the same results as physostigmine and pilocarpine, DFP helped when other medicines failed.

In treating myasthenia gravis, DFP given orally and by injection, relieved the weakness for longer periods than neostigmine but never to

the same degree. Though this drug is not the answer for myasthenia gravis patients, it is hoped that using the effects of DFP on body chemistry as a guide, a more effective chemical for treatment of this disease may be developed.

#### MUSTARD GAS

Mustard gas, [(bis  $\beta$ -chlorethyl) sulfide and bis and tris ( $\beta$ -chlorethyl amines)], shows great promise in the treatment of Hodgkins' disease, lymphosarcoma and leukemia according to a recent report in *Science*. After World War I the adverse effects of mustard gases on leucopoietic tissues and on the growth of experimental tumors received some attention but biological research on chemical warfare agents was somewhat delayed.

The marked effects of both the nitrogen and sulfur mustards on lymphoid tissue, coupled with the finding that active proliferating cells are selectively vulnerable to their cytotoxic action, suggested the therapeutic use of these compounds in the treatment of neoplasms of lymphoid tissue. Since sulfur mustard is highly reactive chemically, it does not lend itself to parenteral administration. However, nitrogen mustards in the form of their hydrochloride salts are water-soluble, crystalline compounds, which can be readily dissolved in sterile saline for intravenous administration. At present, dosage is limited by the occurrence of moderate granulocytopenia, thrombocytopenia, and anemia. However, if care is taken with dosage, an adequate clinical response may be obtained without affecting to a serious degree the formed elements of the blood. Other side-effects include nausea and vomiting for a brief period after each injection.

Approximately 150 patients have been treated with mustard gas to date, observations being limited to selected cases of Hodgkins' disease, lymphosarcoma, and leukemia. The most favorable effects have been obtained in patients with Hodgkins' disease. Since only two of the nitrogen mustards have been investigated, evaluation of the clinical status of these compounds will require more careful study.

# PARENTERAL MEDICATIONS

A DISCUSSION OF THE PREPARATION OF PARENTERAL MEDICATIONS WITHIN INSTITUTIONS BY LEE W. WOLFE, CHIEF PHARMACIST, THE READING HOSPITAL, READING, PENNSYLVANIA.

The widespread need for an inexpensive source of safe parenteral fluids in the average hospital has thrown a problem into the laps of the pharmacists in these institutions. He or she is the one who is naturally the best qualified to handle the problem, therefore, many hospital pharmacists prepare their own solutions in an endeavor to make adequate parenteral therapy economically within the reach of all patients. Many other hospitals would like to reduce the costs of providing such solutions, but hesitate to assume the production because they fear the possible results of so-called "home made" solutions. In the last decade techniques have been developed whereby any average hospital pharmacist can take over the preparation of parenteral fluids safely and inexpensively.

In this 350-bed institution, all the parenteral solutions have been prepared by us for the past seven years. We have supplied safe sterile solutions in ever increasing quantities, sizes, and types to the complete satisfaction of our staff of physicians for use in treating all their patients. We have installed and operated a modified system largely based upon the findings of Carl U. Walter, M.D. in the Laboratory for Surgical Research at the Harvard Medical School.

At the onset of our new undertaking, we installed a new large capacity (10-12 gallon per hour) steam still for the production of one of the prime requisites of safe parenteral fluids - freshly, properly and completely distilled water. Water of this type, singly distilled but chemically pure, has been proved to be safe and free from causing any reactions when injected intravenously, although it may easily be contaminated and made pyrogenic by air borne bacteria, and such pyrogens cannot be removed by ordinary filtration but can be rendered innocuous by sterilization under pressure for 30 minutes, or by ultra or adsorptive filtration (both of which are too slow for the large quantities handled in practice).

The second requisite is the use of C.P. chemicals and their careful handling to avoid gross and unnecessary contamination while in the process of manufacturing the solutions. We buy the C.P. sodium chloride in 100 lbs. and the C.P. granular dextrose in 200 lb fiber drums as a matter of economy, but due to lack of storage space in the small room which has been set aside and equipped solely for the preparation of the parenteral solutions, these chemicals are carefully transferred to 5 and 10 pound glass containers for ease in handling by the operator.

We use all graduated pyrex glass flasks of 100, 1000 and 1800 cc. capacity, both for their resistance to breakage in all types of handling and because of their insolubility. They are carefully prepared, not more than two hours before use by first rinsing with hot water then by washing with a detergent and rinsing with hot water until there are no water breaks on draining and finally rinsing with distilled water immediately before filling. The flasks are sealed with a rubber bushing and a stainless steel stopper. These are also cleaned before using in the same manner as the glassware.



Lee W. Wolfe



Dilution Table

In the actual preparation of the solutions, the avoidance of mass filtration and bulk dilution is found to be the most convenient, and the handling of large quantities of fluids can be avoided by using a technique which limits possible spoilage due to improper mixing, faulty filtration, or careless contamination. We make up stock or concentrated solutions which are then diluted with distilled water in the small individual flasks from which they are finally dispensed directly to the patient. In this fashion we believe that in cases of errors in mixing or measuring, they can be detected and corrected early and easily and with a minimum of loss to the institution.

The stock solution of sodium chloride is manufactured by dissolving 170 grams of C.P. sodium chloride in sufficient freshly distilled water to make 1108 grams by weight.

The stock solution of dextrose is manufactured by heating, about 500 grams of freshly distilled water to the boiling point, then adding 500 grams of C.P. dextrose, agitating into solution and then adding sufficient freshly distilled water to make 1177 grams by weight.

Both of the above stock solutions are first filtered through three thicknesses of hard filter paper to eliminate any possibilities of gross contamination by dust, paper or other particles which may have been picked up during handling. The removal of any of the aforementioned contaminants speeds up the next process of filtration through unglazed porcelain or fritted glass filters which might be slowed by mechanical plugging of the pores, which are extremely fine.

After each use, these filters are rinsed with hot cleansing solution and soaked in sulfuric acid and potassium dichromate solution for at least 24 hours. Before re-use they are washed again and then rinsed with freshly distilled water until free of all acid reaction by litmus test.

The stock solutions are filtered into volumetric burettes (cleaned and treated the same as filters) by means of suction (water faucet type) and are then ready for use in making the final dilutions according to the table.

In addition to the most commonly used solutions which we use in comparatively large quantities we also manufacture a number of other solutions which we use in lesser quantities as follows: M/6 Sodium Lactate in 100 cc. flasks by diluting 266 cc. of 50% Sodium Lactate solution to 1049 grams with freshly distilled water by weight.

Lactate Ringer's Solution in 1000 cc. flasks by dissolving:

	Stock Solutions Sodium Chloride	Stock Solution Dextrose	Freshly Distilled Water
500 cc Normal Saline	25 cc.		q.s. 527 grams
1000 cc Normal Saline	50 cc.		q.s. 1049 grams
1500 cc Normal Saline Solution	75 cc.		q.s. 1576 grams
500 cc 5% Dex- trose in NSS	25 cc.	50 cc.	q.s. 533 grams
1000 cc 5% Dex- trose in NSS	50 cc.	100 cc.	q.s. 1066 grams
1000 cc 5% Dex- trose H <sub>2</sub> O		100 cc.	q.s. 1066 grams
500 cc 10% Dex- trose in NSS	25 cc.	100 cc.	q.s. 543 grams
1000 cc 10% Dex- trose in NSS	50 cc.	200 cc.	q.s. 1086 grams

Sodium Chloride	6.0 grams
Sodium Lactate	2.4 cc.
Potassium Chloride	0.4 grams
Calcium Chloride	0.2 grams
Freshly Distilled Water,	
to make	1000.0 cc.

Isotonic Solution of Three Chlorides according to the U.S.P. XII; this is prepared in 500 and 1000 cc. flasks and in 100 cc. vials, the latter essentially for use by our Anesthesia Department in the preparation of dilutions of metycaine and other local anesthetics for use in local infiltrations.

We package normal saline, distilled water and procaine 2 percent solution in the same type 100 cc. rubber capped vials for general use throughout the institution wherever indicated, but the quantities have increased greatly in the past two years with the advent and increased use of penicillin therapy. The normal saline is made along with the main group of parenteral solutions and then divided into 30 or 60 or 100 cc. vials before sterilization. The procaine 2 percent solution is manufactured by dissolving 40 grams of procaine hydrochloride crystals in 2000 cc. of

freshly distilled water, filtered through paper and then through the fritted glass or porcelain filters before being packaged in the 100 cc. vials. All of these 100 cc. size vials are capped with a rubber diaphragm type cap and placed in a home-made gadget which is clamped securely to withstand the internal expansion of the air during sterilization, and thereby keep the caps in place.

All solutions, after preparation, are placed upon a wheeled truck and rolled into a large autoclave where they are sterilized with steam at 250° F. and 18 lb pressure for 30 minutes. The steam is turned off and the temperature allowed to drop to 200 degrees before the door is opened. This is to prevent the concentration of solution which results after the sudden boiling action, and consequent loss of water if the pressure is released suddenly. Upon removal, the stainless steel stoppers in the large flasks are pushed in completely to make the final seal and retain the vacuum which results upon cooling due to the condensation of the steam which has displaced the air in the flask during sterilization. This vacuum produced is remarkably good (about 29 mm Hg) and not only preserves the seal of the solutions but can be used as a rough indication of proper handling and consequent safe sterility over an indefinite period of storage time. The water hammer sound which is obtained by slapping the sealed flask with the hand and gives evidence that it has been properly sterilized and sealed and has not been opened to possible contamination since.

After manufacturing processes are completed, a sample from each lot is tested for pyrogens by injecting it into an animal under conditions simulating the actual uses in patients. The sample used, is usually taken from a flask of the 5 percent dextrose solution in normal saline in order to test both the dextrose and the saline stocks at the same time. A 10 cc. dose is injected into the marginal ear vein of a rabbit under aseptic technique. The rabbit's tempera-

ture (which has been proved to be within the normal range 101 to 103 degrees for two to four hours before use) is taken hourly for three to four hours and if the rise is not more than 0.6 degree above the original average (the usual febrile reaction of pyrogen contaminants causes a rise of temperature to 105-107 degrees) we accept the lot, label and date it and place it in stock for use. Economically speaking, this test on rabbits for pyrogens is quite inexpensive since the labor cost is nil and the rabbits may be borrowed from the hospital laboratory's stock of those to be used in the Friedman pregnancy test. They may then be returned after using (with no harm done, for rather, they have been benefited by the injection of the nutrient dextrose solution) netting no cost whatsoever to the Pharmacy Department. Periodically we send a sample to our bacteriological laboratory to be cultured as a final check on the sterilization technique, and autoclave's efficiency.

Periodically too, we run the sample tested in the rabbit for pyrogens through one of the regular intravenous sets as prepared in the central supply room for routine use in parenteral medication of our patients. In this way, we prove that their techniques of cleaning, and preparation of sets are also up to par and will not reflect at any time on the action or results of our products.

We believe that the general techniques which we follow with a few of our own modifications, but which have been grounded on intensive and extensive research by properly qualified persons, can be put into successful operation by any hospital pharmacist without too great an investment by his institution and with just as gratifying results in the future as have been obtained in the past.

We would be more than pleased to discuss and demonstrate details of our system with any other hospital pharmacist who is interested, either by mail or personally if he or she would choose to visit our institution.

# CURRENT LITERATURE

## OF HOSPITAL PHARMACY

### HOSPITAL MANAGEMENT (May 1946)

"Investigate Hospital Pharmacist Before You Employ Him" by Edward Spease - Points which the hospital administrator should consider when hiring a hospital pharmacist including reasons for such considerations. page 94

"How Hospital Pharmacy Serves Both Patients and Public" by Kenneth S. Bogart, chief pharmacist, Methodist Hospital, Indianapolis, Indiana - A description of the pharmacy and the work done by the department at Methodist Hospital. page 98

### HOSPITAL MANAGEMENT (June 1946)

"Survey of Routine Drugs Bares Need For Standardization" - A broad interpretation of the term "routine drugs" by hospital administrators was found to exist when a recent survey was made by Hospital Management to determine what should be included as "routine drugs" on the patient's bill. Lists of the routine drugs used in several hospitals are included. page 86

"What Does Hospital Pharmacy Require? Here's One Answer" by Phyllis Platz, Bryan Memorial Hospital, Lincoln, Nebraska - Factors which make up an ideal hospital pharmacy are listed. Included also, is a diagram of 125-bed Bryan Memorial Hospital. page 94

### HOSPITALS (May 1946)

"Attaining Economy In the Pharmacy Through Non-Sterile Manufacture" by Robert A. Kumpf, formerly chief pharmacist, New Haven Unit, Grace-New Haven Hospital. - Advantages of manufacturing in the hospital pharmacy include dollar savings, quality, consistency and greater availability, as well as improvement in service and reduced cost to patient. page 103

"Elements of The General Hospital" by George Bugbee, executive director, American Hospital Association - A guide for hospital planning including floor plans for a pharmacy in a 50-bed, a 100-bed, and a 200-bed hospital. page 53

### MODERN HOSPITAL (June 1946)

"To Control Abuse of Internships" by Don E. Francke, University Hospital, Ann Arbor, Michigan - The A.S.H.P. should adopt some standards for pharmacy internships in approved hospitals in order that the principle of internship should not be abused. page 92

### SOUTHERN HOSPITALS (April 1946)

"With The Hospital Pharmacist" - Monthly column edited by D. O. McClusky, Jr. - News items and notes on new drugs of interest to hospital pharmacists. page 74

### SOUTHERN HOSPITALS (May 1946)

"With The Hospital Pharmacist" - includes article entitled "Prescription Writing Course Urged for Medical Schools."

"Economics of Cooperation" by Anna D. Thiel, C. Ph. Jackson Memorial Hospital, Miami, Florida - Only when there is cooperation within the pharmacy department can efficient service be given to other departments. page 76

### AMERICAN PROFESSIONAL PHARMACIST (May 1946)

"Hospitals and Tax-Paid Alcohol" - A discussion of the law pertaining to the use of tax-free alcohol in the preparation of medications for out-patients by the hospital pharmacist. page 460

### JOURNAL AMERICAN PHARMACEUTICAL ASSOCIATION (May 1946)

"Minimum List of Books For a Hospital Pharmacy" by Edward J. Ireland, New Orleans College of Pharmacy, Loyola University - Article which was presented at the American Society of Hospital Pharmacists, 1944 meeting, Cleveland - includes a complete list of books, journals and house organs which should be included in the hospital pharmacy. page 223

(Continued on page 87)





By Glenn L. Jenkins, Dean  
School of Pharmacy  
Purdue University

# PROGRAM AND PLANS OF HOSPITAL PHARMACISTS

It is with a feeling of inadequacy that I, who am not and never have been a hospital pharmacist, speak to you on the subject of "The Program and Plans of the Hospital Pharmacists." In preparation I have partially reviewed the work and activities of your organization and members. This review leads me to conclude: (1) that you have established a firm basis on which to grow, (2) that you have already made the position and work of the hospital pharmacist known, (3) that you have stimulated association officials, educators and others to think about and consider hospital pharmacists in all plans, (4) that you have drawn broad plans for a program of action but the details of these plans have not been completed or made effective, and (5) that a feeling of partial frustration exists; a feeling that you have not accomplished all that you should have accomplished and that others have not done for you as much as you desire that they should have done.

If my conclusions are correct at least in part, may I remind you that plans are not simply drawn and executed; they are evolved and carried to fruition by sustained and persevering enthusiasm and toil. You have made real progress but, because you started late, you must progress even more rapidly to come up to and keep abreast of a rapidly changing world. In the time allotted to me, I wish to offer a few suggestions which may be worth your consideration, namely:

That you revise your constitution to make your first objective to unite all hospital pharmacists through membership in the American Society of Hospital Pharmacists. We all know that the greatest hurdle to progress in pharmacy is lack of organization. Data published in the Journal of the American Medical Association reveals that

there were 1864 government and 4,494 non-government hospitals (total 6358) serviced by 2382 full time and 497 part time pharmacists in 1941. In 1943, there were 2284 government and 4371 non-government (total 6655) serviced by 3563 full time and 605 part time pharmacists. This shows that there are over 2487 hospitals without pharmaceutical service since we know that many hospitals have more than one pharmacist. It has been reported that 377 hospital beds have been added daily to the facilities of hospitals in the United States since the Pearl Harbor attack. The "G.I. Bill of Rights" provides for the construction of additional hospital facilities as needed and makes available \$500,000,000 for this purpose. This is equivalent to 500 one million dollar hospitals.

## MEMBERSHIP

Your Membership Committee report for 1943 shows that 183 hospital pharmacists were mem-



School Of Pharmacy - Purdue University,

\*Taken in part from a paper presented at the Cleveland Meeting in 1944.

bers of the American Society of Hospital Pharmacists. In January 1946 the membership was about 700. This shows progress but it is obvious that your first step in a long range program is to organize substantially all of the hospital pharmacists with your Society during the next five years. How can this best be done? First, you must create an attitude that "You are not a hospital pharmacist unless you are a member of the American Society of Hospital Pharmacists." Individuals do not join societies for what they can get from them. They join to ally themselves on an equal basis with fellow workers and to contribute to a cause. You have prestige and you have a cause; use them.

How can you reach your prospective members who are widely distributed? A campaign by mail is the obvious method. Have a well-known member of your Society, the dean or a faculty member in a school, or some other person well known to the prospective member nominate him for membership. A form letter "\_\_\_\_\_ has nominated you

name and title

for membership in the American Society of Hospital Pharmacists." Follow this with a writeup of your objectives and purposes, include a copy of your constitution and by-laws, any other literature, and a membership blank. Then follow it up within six months by a second letter. You can afford to devote practically all of your funds for this purpose. The A.Ph.A. Secretary's Office should and can help. You must prepare and maintain complete and accurate mailing lists. Enlist the aid of state board secretaries and state association secretaries for this purpose. It will require much work from your members.

You should also create a class of membership under the title "Fellow of the American Society of Hospital Pharmacists." This title might be reserved for those who have completed two or more years as a hospital pharmacist and who may be expected to substantially make hospital pharmacy a lifetime career. A fellowship status will prove attractive to those now in practice and will aid in inducing them to join with you.

Your second objective should be the establishment of all pharmaceutical service in hospitals by and under the supervision of qualified pharmacists. This will take time and you will need the cooperation of all state and national associations. However, you should lay out a legislative program directed to this end and place this program before each state and national association in an effort to enlist their support.

## LITERATURE

You should seek to create a literature of hospital pharmacy. Your members have made an excellent start through papers and space in the Practical Edition, Journal A.Ph.A. and other journals. What you have done thus far has served better to enhance the prestige of hospital pharmacy than anything else.

## RESEARCH

You should establish research as one of your objectives. I do not mean profound research into the cause and treatment of disease or the creation of new remedies but rather research within the scope of the qualifications of your members and in accord with the facilities available in a hospital pharmacy, i.e., new and improved forms of administration and methods for their production in the hospital. Research is an important means of establishing the pharmacist's prestige with the hospital staff and through publication with other scientists.

## EDUCATIONAL PROGRAM

No special educational program leading to a degree, such as B.S. in Hospital Pharmacy, has been set up to my knowledge, and I question the desirability of doing so. We must remember that it is just as important to maintain the free rights of fully qualified pharmacists to enter hospital practice as it is to maintain the full rights of hospital pharmacists to enter retail or industrial practice. Special educational programs leading to a distinctive degree and special qualifying examinations or apprenticeships will restrict your field and you must expect to meet counter-measures restricting you to your field. Such plans should be worked over and deferred until your organization is stronger.

The writer has previously set forth those elements of a broad general educational program designed to prepare the pharmacist as a cultured and intelligent citizen and as a professionally competent individual (American Journal of Pharmaceutical Education, July 1945, pages 413 to 420). The basis of the whole program is the selection of superior high school graduates and their training for managerial positions in retail, hospital, and industrial pharmacy. A flexible curriculum can be established within which the individual program of each student may be constructed along specialized lines. Thus the student desiring to

enter research may secure mathematics through calculus, modern languages, physical chemistry, etc.; the student planning on industrial pharmacy can secure chemical engineering subjects; and the hospital pharmacist can secure special courses in hospital pharmacy. The result is that upon graduation the student meets the general qualifications for licensure as a pharmacist and has also secured specialized training. All students are required to take such subjects as English, government, public speaking, psychology, economics, college mathematics, and a year of physics. All students are also required to take one year of general inorganic chemistry, a semester of qualitative analysis, a year of basic organic chemistry, and a semester of qualitative analysis. These courses are followed by a semester course in organic pharmaceutical chemistry, a semester course in drug analysis, and a year of physiological chemistry. Additional courses in chemistry may be selected by those who are particularly interested. The chemistry courses meet all educational requirements of industry and civil service to qualify as a chemist.

The biological field is covered by general semester courses in botany, histology, zoology, and bacteriology; one year courses in pharmacognosy and physiology, semester courses in pathogenic bacteriology, pharmacology and toxicology, biological assaying, biological products, and public health. Additional subjects in biology may be elected. The courses in biology are designed to recognize the growing importance of bacteriology and pharmacology and the declining importance of pharmacognosy.

Pharmacy is covered by a one year course in general pharmacy, semester courses in inorganic pharmacy, prescription practice, manufacturing pharmacy, history and ethics, and pharmaceutical economics followed by a year of dispensing pharmacy. The manufacturing pharmacy is actual machine manufacturing and the dispensing course consists of compounding physicians' prescriptions under supervision by pharmacists for patients. A course in advanced manufacturing may be elected.

These courses give graduates fundamental training in the theory and practice of chemistry, biology, and pharmacy, and a considerable basis in physics and cultural subjects. Nevertheless, for hospital practice additional instruction is needed. Additional instruction is needed particularly for the student who wishes to serve in a hospital as a consultant to the physicians. A program leading to the M.S. degree without foreign language requirement and with thesis work op-

tional has been established in one school. An outline of this program follows.

#### Major - not less than 21 credit hours

Required courses		cr.
Hospital Pharmacy		3
Advanced Pharmaceutical Production		6
Biological Medicinal Products		2
Pharmaceutical Literature		1
Organic Medicinal Products		4 to 8
		16-20
Elective courses		
X-ray Technic		2
Advanced Dispensing		3
Product Formulation		2
Advanced Preparations		4 to 8
History of Pharmacy		1 to 2
Special Problems		1 to 4
Seminar		1 to 2

Minors: The student shall select two minors with not less than 12 credit hours from the following groups of courses:

- (a) Physiology
  - Experimental Animal Physiology 8
- (b) Pharmacology
  - Applied Pharmacology 3
  - Biological Assays 4
  - Advanced Pharmacology 2 or 3
- (c) Bacteriology
  - Advanced Bacteriology 4
  - Immunology and Serology 4
- (d) Pharmaceutical Chemistry
  - Natural Drug Products 4 to 8
  - Advanced Pharmaceutical Analysis 6

Students wishing to prepare for research might take a similar program of 27 credit hours in course and 6 credit hours thesis. All credits earned toward the M.S. degree might be applied toward the Ph.D. degree by those who wish to pursue additional graduate work.

#### THE SMALL HOSPITAL

The small hospital constitutes a real problem for the American Society of Hospital Pharmacists. The hospital of 500 to 1000 beds will normally provide a pharmacy and one or more pharmacists. For every large hospital there are a number of small hospitals which may have 100 or even 10 beds. These small institutions also need adequate pharmaceutical service.

In all considerations that have come to my



attention relative to proposed standards of education and licensure for hospital pharmacists, the small hospital has been ignored; and yet that is where the greatest improvement in service is needed. Any program that erects barriers between the pharmacist serving a small hospital on a part-time or contract basis and the full-time hospital pharmacists will retard progress.

What should be the standards for pharmaceutical service in a small hospital?

The Indiana State Board of Health under a plan for the inspection and licensure of hospitals promulgated the following regulations effective January 1, 1946:

**"Storage of Medicines:**

- (a) All medicines, poisons and stimulants kept in a nursing service division shall be plainly labeled and stored in a specially designated medicine cabinet, closet or storeroom, and made accessible only to authorized personnel. The cabinet for drugs shall be well illuminated.
- (b) Narcotics must be securely locked at all times and accessible only to persons in charge.
- (c) All medications shall be discarded when orders have been discontinued or patient has been dismissed."

**"Pharmacy:**

The pharmacy operating in connection with a hospital shall comply with regulation HHL33 and it shall comply with the provisions of the pharmacy law requiring registration of drug stores and pharmacies and with the regulations of the Indiana State Board of Pharmacy, and with the provisions of the Indiana Food, Drug and Cosmetic Act, Chapter 38, Acts of 1939, and all regulations promulgated thereunder.

- (a) In hospitals with 30 beds or more the pharmacy or drug room shall be under the full time or part time supervision of a pharmacist licensed to practice in the State of Indiana.
- (b) In hospitals of less than 30 beds where the drug room is not under the supervision of a licensed pharmacist, the services of a pharmacist in the community or a pharmacist

inspector from the Indiana State Board of Health, shall be obtained periodically to consult with the hospital administrator relative to the labeling, storage and dispensing of drugs.

- (c) The pharmacist shall with the approval of the administrator of the hospital initiate rules, regulations and procedures to provide for the administrative and technical guidance in all matters pertaining to the handling and dispensing of drugs."

These regulations are not wholly adequate. The American Society of Hospital Pharmacists can render an excellent service by drawing up a set of standards that might be used to regulate practices in nursing homes, sanatoria, small private hospitals, etc. Likewise qualifications for the pharmacist in a small hospital should be drawn up.

**CURRENT LITERATURE**  
(continued from page 83)

**JOURNAL AMERICAN PHARMACEUTICAL ASSOCIATION** (June 1946)

"Pharmacy's Specialists Need Specialized Training" by Edward Spease, former dean, Western Reserve University School of Pharmacy - Pharmacy schools are urged to give specialized training in hospital pharmacy and to have an experienced hospital pharmacist on the teaching staff.  
page 273

"Designing a Hospital Pharmacy for a 250-bed Institution With Outpatient Clinic" by Hans S. Hansen, chief pharmacist, Grant Hospital, Chicago - A plan for the hospital pharmacy and its relationship to other departments of the hospital is discussed along with a sketch of floor plan.  
page 84

# Timely

## DRUGS

**ALGINIC ACID** . . . derived from marine kelp has proved effective as a hemostatic agent. Used on a series of 100 cases of extraction and minor oral surgery of the mouth, alginic acid controlled the bleeding and unusually prompt healing resulted. In no case was there untoward action.

Prepared as a powder, alginic acid is applied to the bleeding points combining with the calcium and immediately forming a coagulum that seals the wound. The styptic action is prompt, and new tissue is formed. This action as a coagulation accelerator is similar to that exerted by fibrinogen and thromboplastin.

**CHLOROQUINE** . . . commonly known as SN 7618, is a highly effective, safe, antimalarial drug which is superior to quinine and quinacrine hydrochloride in the treatment of acute attacks of vivax malaria. For suppressive therapy, a dose of 0.5 gram on the same day of each week is recommended. In the treatment of acute attack of malaria, an initial dose of 1.0 gram of SN 7618 followed by an additional 0.5 gram after six to eight hours and a single dose of 0.5 gram on each of two consecutive days is sufficient to produce prompt disappearance of the symptoms. Satisfactory responses have also been reported following the administration of 2.0 gram in divided doses over a period of 24 hours. Side effects after the administration of SN 7618 include mild and transient headache, visual disturbances, pruritus, and gastro-intestinal complaints.

For experimental studies, chloroquine is supplied in vials of 10 tablets and in bottles of 100 tablets, 0.25 gram, by the Winthrop Chemical Company.

**DIBUTOLINE** . . . the dibutyl amino derivative of doryl, is a rapidly acting mydriatic having a relatively short duration of action. It produces no sensitization in patients as does atropine. Dibutoline will be used in a 2 to 5 per cent concentration. This drug is available from Merck and Company for experimental use.

**DIRAMIN** . . . a new antimonial, has been found to be a good safe preparation to use in the treatment of the tropical disease, granuloma inguinale. No untoward side reactions were noted when 2 cc. ampules containing 8.17 mg. of antimony per cc. were administered intravenously to patients three times weekly. When given intramuscularly pain and local irritation resulted.

This new antimonial is an aqueous solution of the reaction mixture resulting from the reaction between antimony catechol and triisopropanolamine in the presence of propylene glycol.

Diramin has not yet been released for general use but is available for research from Parke, Davis and Company in 2 cc. ampules containing 8.17 mg. of antimony per cc. and in 10 cc. rubber-diaphragm-capped vials containing 8.32 mg. antimony per cc.

**MERCUHYDRIN** . . . a new organic mercurial in combination with theophylline is as effective as a diuretic as is mercupurin and can be administered intramuscularly without pain and with less irritation.

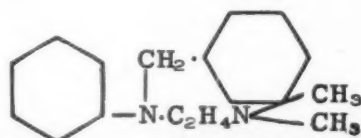
Mercuhydrin is indicated as a diuretic in the edema of cardiorenal disease and of nephrosis, ascites of liver disease and other conditions. In all of these conditions, administration of 2 cc. intramuscularly or 1 to 2 cc. intravenously produces satisfactory diuresis both as to quantity of urine excreted and as to duration of the effect.

This new diuretic is used both intramuscularly and intravenously. It is well tolerated systemically, and when injected intramuscularly it is significantly free of local reaction. Accidental extravasation during intravenous administration has not resulted in serious tissue injury.

Mercuhydrin is available in 1 cc. or 2 cc. ampules from Lakeside Laboratories, Inc., Milwaukee 1, Wisconsin.

**PYRIBENZAMINE** . . . a new drug which prevents the typical effects of histamine has been introduced by Ciba Pharmaceutical Company. Pyribenzamine is similar to benadryl in its physio-

logic and antiallergic action and has a very low toxicity when given orally but appears rather toxic when injected intravenously. Also, pyribenzamine, as well as benadryl, exerts only a symptomatic effect which limits its usefulness.



Pyribenzamine  
(N-pyridyl-N-benzyl-N-dimethyl-ethylene-diamine mono hydrochloride)

This new antihistamic drug has proved efficacious in the symptomatic treatment of urticaria and hay fever, and to a lesser extent in perennial rhinitis, asthma, atropic dermatitis (allergic eczema), and other forms of allergy. Oral administration only is recommended for pyribenzamine at present. The average dose is 50 mg. three or four times a day. If the symptoms are controlled, the dose is reduced to one-half or less; if not, the dose may be doubled and 100 mg. may be given three or four times daily. Side effects include sleepiness or drowsiness and dizziness. Less frequently dryness of the mouth, nausea, and diarrhea have occurred.

SODIUM NICOTINATE . . . has been used for the relief of certain types of headache according to a recent report in the Journal of the American Medical Association. Administering the drug intravenously to 100 patients with severe headache 75 were completely relieved with somewhat dramatic results in many cases.

In the experimental studies 100 mg. of sodium nicotinate was injected into the veins. The average person noted a flush and was aware of the effects in from thirty to forty-five seconds. Consequently, it is believed that the relief of headaches appears to be correlated with the degree of peripheral flush. Intravenous sodium nicotinate is recommended in the symptomatic treatment of severe idiopathic headache, migraine, and post-spinal tap cephalalgia.

A sterile solution of sodium nicotinate for intravenous use may be prepared according to the following formula:

Nicotinic Acid	42.1 Gm.
Sodium Hydroxide	13.7 Gm.
Freshly Distilled Water,	
to make	1000.0 cc.

Dissolve the sodium hydroxide in 100 cc. of water. Dissolve the nicotinic acid in the alkaline solution and make up to volume. Filter and fill into vials. Autoclave at 120° C. for twenty minutes.

**PARA-AMINO BENZOIC ACID...PABA** - Specific in the chemotherapy of rickettsial diseases is the compound para-aminobenzoic acid. Rickettsias, midway in size between bacteria and viruses, spread disease through the medium of such vectors as ticks, fleas, lice and mites. Para-aminobenzoic acid seems to be as specific against rickettsial diseases as do penicillin and the sulfonamides in many bacterial infections. Para-aminobenzoic acid, generally considered as one of the B-complex, is thought to act against rickettsias by stimulating cellular metabolism, which inhibits the infecting organism sufficiently to permit development of an enduring immunity.

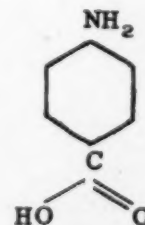
The drug is indicated in the prophylaxis and treatment of such rickettsial infections as Rocky Mountain spotted fever, epidemic and endemic typhus, tsutsugamushi disease (scrub typhus) and similar conditions.

The dosage for prophylaxis against Rocky Mountain spotted fever, endemic typhus, and tsutsugamushi disease in areas of endemic rickettsial infection is 0.25 to 0.75 gram daily for children, and 0.5 to 1.0 gram daily for adults. The dose should be increased in case of known bites.

The therapeutic dose for adults is 4 grams of para-aminobenzoic acid initially, followed by 2 grams every two hours. Children should receive from a quarter to a half of the adult dose. The blood level should be kept at 10 milligrams per cent, or above. To prevent acidosis 1 gram of sodium bicarbonate should be taken with each gram of para-aminobenzoic acid. Since the drug is antagonistic to the sulfonamides it should not be used in conjunction with sulfa drugs.

Tablets of para-aminobenzoic acid, 0.25 gram, are available from Wyeth Incorporated.

Para-Aminobenzoic Acid



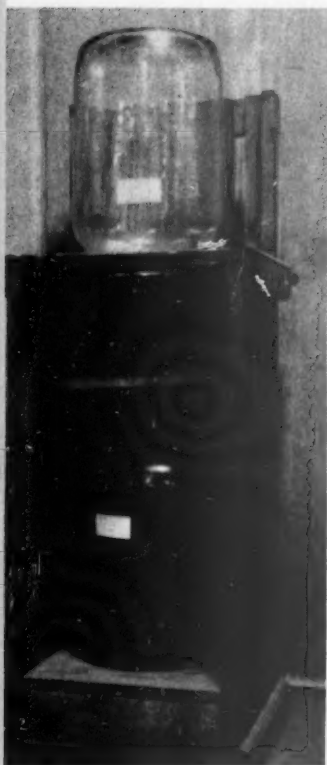




# NOTES

*and*

These items are particularly designed for those hospitals that appreciate economy and ingenuity from the departments. There is little actual cost involved but much labor can be saved and routines simplified. These items were submitted by Leo Godley, Chief Pharmacist, New York University Clinic, with photographs by Michael Aglione, Pharmacist.



## FILTER RACK

This is the old filter rack with some innovations worthy of mention. Its purpose is for filtering from one five-gallon jug into another. (It could be built for one-gallon jugs if desired.) The stand is built so that it is about three inches higher than the five gallon jug with the funnel inserted. A bar with a hole in the center for the funnel neck is nailed across the center of the stand an inch above the jug so that the funnel neck can fit into the jug without resting on it. (This avoids breakage and jamming.) A six or eight inch hole is cut in the top around which a piece of rubber has been placed to cushion the impact when a filled jug is inverted over the hole in filtering position. The back of this stand was built up eighteen inches high to act as a stop and prevent the jug from tipping over when inverting.

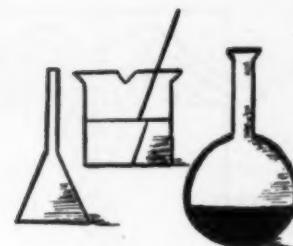


## A CART FOR INTRADEPARTMENTAL USE

A silent, manipulable cart for use in the pharmacy can be mounted on the chassis of a discarded wheel chair. This one solves many problems in trips to and from the solutions laboratory, the pharmacy and store rooms. Its dimensions will be limited only by the length and width of the chassis. The small wheel was advisedly put in front to be out of the way of the operator's feet; and the back was built high so that the cart could be pushed without stooping.

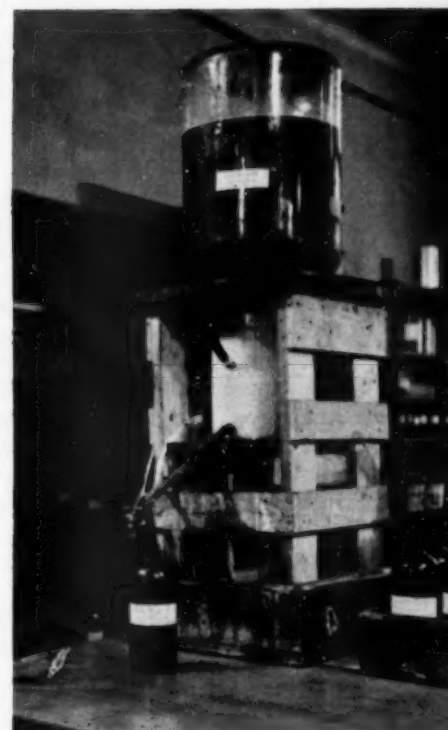
If you don't happen to have a dilapidated wheel chair, try your neighboring hospitals. Your hospital carpenter should have no trouble with this job.

# SUGGESTIONS



## A DEVICE FOR FILLING STOCK BOTTLES

This bottle filling device solves much of the spilling and siphoning problems encountered in the daily routine. A sturdily but simply constructed stand was built two feet high and fourteen inches square. A shelf was built in so that a douche or enema can will fit in easily under the top. A six-inch hole was cut in the top around which a piece of rubber was placed to cushion the impact when a filled jug was inverted over the hole. A short length of rubber tubing with a pinch clamp was connected to the spout in the can. Five gallons of a liquid can be filled into smaller bottles in a very short time without discomfort or spillage.

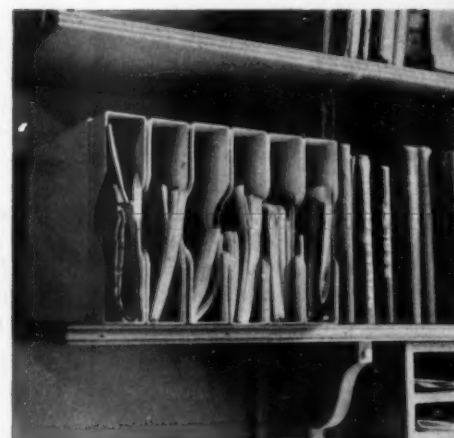


## TINCTURE OF SWEET ORANGE PEEL MANUFACTURE SIMPLIFIED

Most hospital pharmacists get orange skins from the Dietary Department for making tincture of Sweet Orange Peel. It is most difficult to separate the outer rind from the white pithy layer; and when the whole peel is used a less elegant tincture results. We have found that our dietary department is not averse to letting us have the whole fruit for peeling. This can be done with a reasonably sharp knife as simply as peeling an apple; and much time is saved compared with freeing the already squeezed fruit from the peel. This does not reduce the useability of the oranges for juice by dietary.

## A FILE FOR SMALL PRICE LISTS

We have found that price lists like Merck's catalogue and International Vitamin Corporation's leaflet got lost among the larger book-like price lists like Lilly's and Abbott's. In order that they all be kept on the same shelf, the bottoms of several 8" x 10" X-Ray film boxes were placed on the catalogue shelf; and the small oddly shaped leaflets and pamphlets that don't behave between bookends were arranged alphabetically in these sections. Now we can keep all the price lists that come—and find them.





## 1946 ANNUAL MEETING IN PITTSBURGH

Holding its third meeting since being accepted as an affiliated organization of the American Pharmaceutical Association on August 21, 1942 the American Society of Hospital Pharmacists will meet at the Hotel William Penn in Pittsburgh August 27 through 30. The program has been arranged so that Society members may have the opportunity to hear all of the splendid talks arranged for by the American Pharmaceutical Association. The Association has done an outstanding job in arranging a series of topics of interest to all pharmacists. Many of the topics to be discussed will have direct bearing on the practice of pharmacy in hospitals.

Dr. Austin Smith, secretary of the Council on Pharmacy and Chemistry of the American Medical Association will discuss "Trends in Therapeutics with Special Reference to New and Nonofficial Remedies." Discussing the new N.F. and U.S.P. will be Dr. Justin L. Powers and Dr. E. Fullerton Cook. All pharmacists will be interested in the talk by Dr. E. C. Elliott, director of the newly inaugurated Survey of Pharmacy. This survey will analyze the practice of pharmacy in all its aspects and its recommendations, if implemented, may well revolutionize the teaching as well as the practice of pharmacy in America. Scheduled to speak also is W. Paul Briggs, director of pharmacy service in the Veterans Administration, who will discuss "Pharmaceutical Service to Veterans."

Preliminary to the opening of the meetings of the American Society of Hospital Pharmacists there will be a gathering of the Executive Committee Monday night August 26 at 8:00 P.M. Opening the sessions of the Society will be a business meeting Tuesday morning at 9:00 A.M.

After the discussion of business, appointment of committees, reports of the standing committees and so forth, the presentation of papers will begin. Tuesday afternoon will be devoted entirely to the presentation of papers while Wednesday morning the Society will hold a joint meeting with the American College of Apothecaries and the Practical Pharmacy Section at which discussions of interest to all groups will be presented.

The final business meeting of the Society will be held Thursday afternoon at which a decision will be reached on THE BULLETIN, amendments of the by-laws voted on and resolutions considered. Following the business meeting there will be additional papers presented. Since there are a fairly large number of papers to be presented the authors are strongly urged to prepare a summary of their paper so that it can be delivered in from 15 to 20 minutes. Only by this method will all those who have given considerable time and study to prepare their manuscript be able to deliver it. As in the past the papers will later be published in their entirety. If you have not yet made your hotel reservations do so at once - the rooms are going fast. Consult the July 1946 Practical Edition of the Journal of the American Pharmaceutical Association for detailed information on room reservations.

Although the schedule for the papers to be presented has not yet been arranged, the following is a list of the talks to be presented:

"Trade and Professional Relations Between The Professional And The Hospital Pharmacist Enhanced By Contribution Of Each Group" by John Zugich, New Haven Hospital, New Haven, Connecticut.



"Pharmacy Service In Veterans Administration" by W. Paul Briggs, Director Pharmacy Service, Veterans Administration.

"A Comparative Study of Ointment Vehicles" by Mitchell J. Stoklosa, Department of Pharmacy, Massachusetts College of Pharmacy.

"Powders Used In Treatment of Duodenal Ulcer" by M. L. Hutton, The Presbyterian Hospital, Chicago, Illinois.

"Storage Temperatures In The Pharmacy" by Marjorie Moburg, Illinois Masonic Hospital, Chicago, Illinois.

"Eye Solutions" by Frank J. Steele, Greenwich Hospital, Greenwich, Connecticut.

"Internship, A Stepping Stone To Better Hospital Pharmacists" by Alice M. Appel, Hospital Intern at Mercy Hospital, Toledo, Ohio.

"Pharmacy Combined With General Stores For the Small Hospital" by Jennie Banning, Bradford Hospital, Bradford, Pennsylvania.

"Our Obligation To Our Profession" by Edith Blanche Williams, Lincoln, Nebraska.

"The Hospital Pharmacist Keeps Pace With Practical Equipment" by Sister M. Jeanette, Mary Immaculate Hospital, Jamaica, New York.

"An Economical Attractive Twenty Gallon Filter Bed" by George F. Archambault and Elinor Zola, Marine Hospital, Brighton, Massachusetts.

"The Teaching Responsibilities Of The Hospital Pharmacist" by Sister M. Teresa, St. Anthony's Hospital, Oklahoma City, Oklahoma.

"Educational Requirements For A Pharmacist From The View Point Of An Educator" by Glenn L. Jenkins, Dean of School of Pharmacy, Purdue University.

Educational Background For A Pharmacist As Viewed From The Experience Of A Practitioner Of Hospital Pharmacy" by Sister Clara Francis, St. Joseph Hospital, Memphis, Tennessee.

"What Should One Stress In Teaching Pharmacology To Nurses?" by Sister M. Clarita, St. Joseph's Hospital, Pittsburgh, Pennsylvania.

"Standardizing Floor Stocks" by Rudolph Cortesi and Joseph A. Barry, The Memorial Hospital, Worcester, Massachusetts.

"Business Administration Of A Hospital Pharmacy Department" by Anna D. Thiel, Jackson Memorial Hospital, Miami, Florida.

"The U. S. Public Health Suggested Plans Of Hospital Pharmacy Departments" - General Discussion.

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THE WISCONSIN HOSPITAL PHARMACISTS held an organization meeting on May 17. Mr. Hans Hansen, chief pharmacist, Grant Hospital, Chicago and chairman-elect of the Society talked on the American Society of Hospital Pharmacists.

The group plans to adopt a constitution and affiliate with the national organization. The following officers were elected: President Sister Gladys Robinson, Milwaukee Hospital, Milwaukee; Vice-President Sister Mary Medicia, Sacred Heart Sanitarium, Milwaukee; and Secretary-Treasurer Miss Ruth White, St. Luke's Hospital, Milwaukee.

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THE GREATER NEW YORK CHAPTER OF THE AMERICAN SOCIETY OF HOSPITAL PHARMACISTS held its monthly meeting at Holy Family Hospital, Brooklyn, N. Y., Wednesday, May 15, 1946 at 2:30 P.M. Sister Etheldreda, Chairman, presided. The minutes of the preceding meeting were read and accepted without any additions or corrections. The new amendment calling for the payment of a fee of \$1.00 annually as dues to the local chapter, was voted upon and passed.

Sister Etheldreda informed the members that Mr. Godley had come forth with the idea of having an Evening Section of our group formed for the purpose of giving lay members an opportunity to come to the regular monthly meetings. This "special" group was to be directly connected with the local group. Another suggestion was that the meetings be held in the evenings every other month. We did not favor the latter since religious do not go outdoors at any time in the evening. Sister Etheldreda and the rest of the members present felt that the decision of forming an "evening" section to our group should be referred to Mr. Francke, National Chairman. Until such time as word is received from him the matter will stand in abeyance.

Since this was to be the last meeting of the season the election of officers took place. The results are as follows:

Sister Etheldreda, Chairman  
Sister Donatus, Vice-Chairman  
Sister Maria Joseph, Corresponding Secretary  
Sister Nicodema, Treasurer  
Sister Loretta, Secretary

A vote of thanks is hereby given to Sister Etheldreda who has been re-elected as Chairman of our group. Sister's untiring efforts to make our group a real "live" one and of lasting benefit and interest to us is appreciated by all. We heard with joy and a certain amount of pride that our Chairman was invited by Rev. Father Schwitalla, S.J., President of the Catholic Hospital Association of the United States and Canada, to act as Chairman of the Pharmacy Forum to take place at the annual convention.

We welcomed Sister Blanchette of St. Peter's Hospital, New Brunswick, to our group.

All the business having been disposed of Sister Etheldreda read a very interesting paper on "Labels." Sister also gave each member an envelope containing samples of the various labels.

A general discussion on the various formulas was resumed. It was decided to compile all the formulas presented by the members so that everyone would be able to use the valuable information at some future time.

The meeting adjourned at 4:30 P.M. Sister Cora Miriam, Pharmacist at Holy Family, took the members on a tour of the Pharmacy. It is very neatly and practically arranged. Before parting for the summer Sister Etheldreda very kindly offered St. Mary's Hospital, Brooklyn, as the meeting-place for September.

THE HOSPITAL PHARMACISTS OF CHICAGO-LAND held a banquet at the Woodmere Hotel dining room on Tuesday June 18 at 7:00 P.M.

"Culture, Medicine and Drugs of China" was the subject of a talk given by Dr. H. Necheles, Director, Department of Gastro-Intestinal Research Michael Reese Hospital.

#### PHARMACY SECTION AT ANNUAL CATHOLIC HOSPITAL ASSOCIATION CONVENTION

"Recent Administrative, Technical and Educational Developments in Hospital Pharmacy Service" was the theme of the pharmacy section of the annual convention of the Catholic Hospital Association held in Milwaukee, Wisconsin June 9 - 13. More than 100 hospital pharmacists were present for the pharmacy section.

With Sister M. Etheldreda from St. Mary's Hospital, Brooklyn, New York presiding, the following program was presented:

#### Tuesday Morning, June 11th

##### SECTIONAL MEETING

Theme—RECENT ADMINISTRATIVE TECHNICAL AND EDUCATIONAL DEVELOPMENTS IN HOSPITAL PHARMACY SERVICE

9:00-11:00 o'clock

Walker Hall

##### PRESIDING OFFICER

Sister M. Etheldreda, F.S.S.J., M.S., St. Mary's Hospital, Brooklyn, New York

##### Hospital Pharmacy Records Including Methods of Making Charges for Medications

Sister M. A. Blanchette, s.g.m., St. Peter's Hospital, New Brunswick, New Jersey—Discussion Leader

##### Professional Policy

- a) Therapeutic Committee
- b) Hospital Formulary

##### Preparation of Parenteral Medications

Sister Clara Francis, O.S.F., St. Joseph's Hospital, Memphis, Tennessee—Discussion Leader

##### The Hospital Pharmacy Internship

- a) Universality of the Requirement
- b) The Administration
- c) The Educational Content

Sister M. John, R.S.M., Mercy Hospital, Toledo, Ohio—Discussion Leader

##### Evaluation of Textbooks and Methods of Teaching Pharmacology to Nurses

##### Advanced Educational Requirements for the Hospital Pharmacist

##### Outline for Instruction of Medical Students and Interns by the Pharmacist

##### Recommendations

##### Adjournment



#### COVER PHOTO

The photo on the cover of this issue is of the exhibit sponsored by the American Society of Hospital Pharmacists at the recent Convention of the Catholic Hospital Association in Milwaukee. Sister Mary John, Mercy Hospital, Toledo, was in charge of the exhibit.



# NEWS ITEMS



## DONALD A. CLARKE ON PHARMACY SURVEY COMMITTEE

Donald A. Clarke, apothecary-in-chief of the New York Hospital is a member of the committee on the Pharmaceutical Survey. The nation-wide survey, conducted by the American Council on Education and directed by Dr. Edward C. Elliott, formerly president of Purdue University, has been initiated by the American Association of Colleges of Pharmacy. Other members of the committee include: George D. Beal, Assistant Director, Mellon Institute; W. Paul Briggs, Veterans Administration; W. W. Charters, Director, The Research Service, Stephens College; B. V. Christensen, Dean, College of Pharmacy, Ohio State University; George V. Doerr, McKesson and Robbins, Inc.; A. G. DuMez, Dean, School of Pharmacy, University of Maryland; Carson P. Frailey, Executive Vice President, American Drug Manufacturers Association; H. Evert Kendig, Dean, School of Pharmacy, Temple University; Frank W. Moudry, Secretary, Minnesota State Board of Pharmacy; Edward Rogers, Chairman of the Board, Sterling Drug, Inc.; Robert L. Swain, Editor, Drug Topics; Frank O. Taylor, Parke, Davis and Company; John A. Stevenson, President, The Penn Mutual Life Insurance Company; Charles R. Walgreen, Jr., President, Walgreen Drug Company.

Funds - approximately \$100,000 - will be provided through a grant made available by the American Foundation for Pharmaceutical Education.

Meeting in Washington, D. C. on June 26, the committee considered the detailed plans of the Survey presented by the Director, Dr. Edward C. Elliott. These included thirty-six special studies of particular problems of pharmaceutical education, practices and services. Dr. W. W. Charters was selected as Chairman of the Committee and Dean A. G. DuMez as Vice Chairman. The Committee recommended that the projects

relating to the testing of the abilities and the achievements of students of pharmacy and to the qualifications for the faculties of the training institutions should receive first attention. Projects were also approved for the development of standards for the selection and the admission of pharmacy students; for the guidance of pharmacy students; for a spot analysis of present-day prescriptions to determine the knowledge required by the pharmacist for compounding; and for analysis of the activities engaged in by pharmacists - professional, commercial, and civic.

## 136 REGISTERED FOR INSTITUTE

One hundred and thirty-six hospital pharmacists have registered for the first Institute on Hospital Pharmacy to be held in Ann Arbor, Michigan, July 15-19. Canada, Puerto Rico, and 28 states will be represented.

## JOHN ZUGICH GOES TO NEW HAVEN

John Zugich has accepted the position as chief pharmacist at New Haven Hospital, New Haven, Connecticut. Mr. Zugich was formerly at University Hospital, Ann Arbor, Michigan and has been chief pharmacist at Oak Ridge Hospital (Tennessee) for the past three years. At Oak Ridge he organized the pharmacy department which supplied a rapidly growing city during the work on the atomic bomb.



### FOSTER AND KINSEY PROMOTED IN U.S. PUBLIC HEALTH SERVICE

Thomas A. Foster, pharmacist and chief of the Purchase and Supply Section of the U.S. Public Health Service, has been commissioned in the Regular Corps in the Full Grade.

R. D. Kinsey of Service Headquarters in Washington, D. C. and T. C. Armstrong, administrative officer at the Marine Hospital, Staten Island, N. Y. have been promoted to the Full Grade in the Regular Corps.

### FRAZIER ACCEPTS NEW POSITION

Walter M. Frazier, secretary-elect of the American Society of Hospital Pharmacists and formerly chief pharmacist at Springfield City Hospital, has been appointed senior pharmacist at University Hospital, Ann Arbor, Michigan. Mr. Frazier accepted the position principally to round-out his training in hospital pharmacy. After a period of several months of training Mr. Frazier expects to take another job in the hospital pharmacy field. Replacing Mr. Frazier at Springfield City Hospital is Miss Anita Gluck, graduate of Purdue and formerly junior pharmacist at University Hospital.

### COMMITTEE APPOINTED TO CONSIDER FUTURE OF THE BULLETIN

A committee has been recently appointed to consider the future plans and policies of THE BULLETIN of The American Society of Hospital Pharmacists. The committee's recommendations will be submitted for consideration at the Society's annual meeting to be held in Pittsburgh August 27 to 30. Among the items to be considered by the committee will be recommendations for the editorial offices, the advisability of appointing an editorial board, and the problem of financing the publication. In considering the matter of financing the publication, the committee will consider the advisability of raising the membership dues and will discuss the desirability of

accepting advertising. The committee will also consider the possibility of working out a cooperative plan with the American Pharmaceutical Association whereby the publication may be issued from Washington under joint sponsorship. Interested members of the Society are invited to send their opinions and recommendations to the chairman of the committee, Roy F. Wise, Lima Memorial Hospital, Lima, Ohio. The committee on is comprised of:

Roy F. Wise, Chairman, President, Ohio Society of Hospital Pharmacists.

Robert P. Fischelis, Secretary, American Pharmaceutical Association.

Hans S. Hansen, Chairman-Elect, American Society of Hospital Pharmacists.

Sister M. Clara Francis, St. Joseph Hospital, Memphis, Tennessee.

Albert P. Lauve, Charity Hospital, New Orleans, Louisiana.

Walter M. Frazier, Secretary-Elect, American Society of Hospital Pharmacists.

Rose Tricomi, Newton-Wellesley Hospital, Newton Lower Falls, Massachusetts.

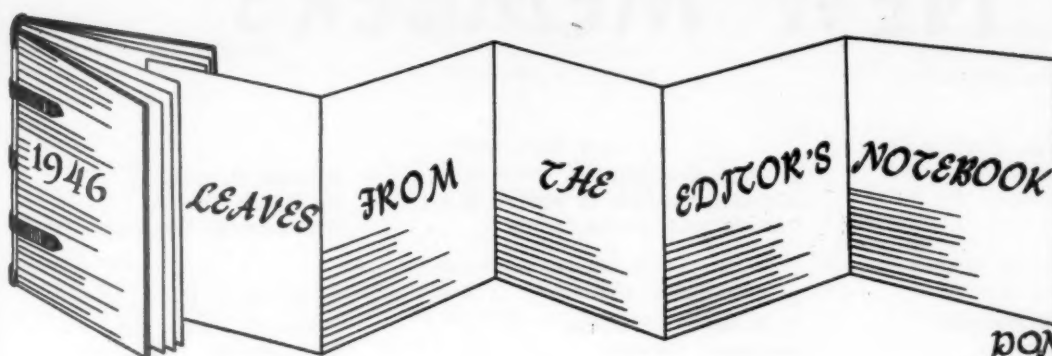
Leo F. Godley, New York University Clinic, New York City.

Maybelle Fernald, Sutter General Hospital, Sacramento, California.

William Levin, Philadelphia General Hospital, Philadelphia, Pennsylvania.

### FRANCKE AND NIEMEYER RESIGN AS EDITORS OF THE BULLETIN

Don E. Francke and Gloria Niemeyer, editors of THE BULLETIN have resigned their editorial positions in order to expedite the activities of the newly appointed committee on THE BULLETIN. The resignations become effective at the discretion of the committee on



DON E. FRANCKE

May 9 . . . . . Tonight with pharmacists Phillips, Lang, Niemeyer, Hancock, Baker and Bowles to Detroit to attend the organizational meeting of the Michigan Society of Hospital Pharmacists. Held at the very hospitable Alexander Blain Hospital, the meeting was surprisingly well attended and we were pleased to see the enthusiasm shown. Happy to see many of the Detroit hospital pharmacists in attendance including Carl Abend who has long been a staunch worker in the field. A splendid talk was given by Wayne University College of Pharmacy's Dean LaKey who has big things planned for his school in the hospital pharmacy field. Thanks to Louis Lester, Katie Lim and Belle Moskowitz the Michigan group is well on its way toward organization.

May 19 . . . . . An invitation from M. R. Kneifl, secretary of the Catholic Hospital Association, to participate in the Catholic Hospital Association Convention in Milwaukee. Mr. Kneifl is anxious that we arrange an exhibit on hospital pharmacy. A call to Sister Mary John, able pharmacist at Toledo's Mercy Hospital to learn if she is willing to take charge of the exhibit. Was happy when she accepted and am also pleased that such a fine program, with Sister Etheldreda as chairman, has been arranged for the great number attending the Catholic Hospital Association Convention.

June 11 . . . . . A visit from Dr. Joseph B. Sprowles, Professor of Pharmacy at the University of Buffalo, who came to Ann Arbor to look over the Department. Actively interested in hospital pharmacy, Dr. Sprowles is retained as a consultant to several Buffalo Hospitals. Mentioning Francis X. Sturner of Buffalo General Hospital, Dr. Sprowles commented on the splendid work Mr. Sturner is doing in his hospital.

June 19 . . . . . Much time spent in trying to find a suitable place to hold the social hour of the Institute. To several country clubs to determine what type of arrangements can be made and conferring with University officials to obtain a bus for transportation. It is difficult to find a large enough room with proper furnishings and food service to accommodate the number expected. Also the many Sisters who are expected at the Institute would not be able to attend, so finally decide to try to make arrangements to hold the social hour in Stockwell Hall.

June 20 . . . . . Today came E. R. Jones, chairman of the program committee of the Michigan Branch of the American Pharmaceutical Association to discuss plans for the coming year's meetings. Mr. Jones had the program so well outlined and planned that there was little to be done. At night with Pharmacists Pierce and Niemeyer we get THE BULLETIN in envelopes, tie them in bundles and loaded in the car ready to be taken to postoffice in the morning.

June 24 . . . . . At long last our hospital Formulary is printed and on the way to Detroit to be bound. Have tried hard to make it one of the best formularies in the country but shall have to wait to determine whether the effort has been successful. Much help and many valuable suggestions came from Gloria Niemeyer and we are happy that she took such a great interest in the work and was able to contribute so much. Thanks also to the cooperation of George Phillips and Betty Ann Hancock the tiresome task of proofreading the 400 pages was better accomplished. Although four of us proofread all pages, the last one to do so always seemed to manage to find some type of error.

# NEW MEMBERS

Carl Abend  
Grace Hospital  
Detroit, Michigan

Leo M. Abramson  
Newington Veterans Hospital  
Newington, Connecticut

W. M. Adams  
Vicksburg Hospital  
Vicksburg, Mississippi

Allen Beck  
Indiana University Medical Center  
Indianapolis, Indiana

W. Paul Briggs  
Chief Pharm. Div., Vet. Admin.  
Washington, D. C.

David Burack  
Newington Veterans Hospital  
Newington, Connecticut

Josephine S. Certo  
4500 Carroll Street  
Pittsburg, Pennsylvania

Sister Mary Hiltrudis Chlebik  
St. Mary Hospital  
LaSalle, Illinois

Maurice H. Collard  
7331 Berri St.  
Montreal, Province of Quebec, Canada

Nina E. Connelly  
910 Seward  
Detroit, Michigan

Joseph J. Conte  
457 Dudley Street  
Boston, Massachusetts

E. Fullerton Cook  
Philadelphia Coll. of Pharm. & Sci.  
Philadelphia, Pennsylvania

A. B. Curtis  
U. S. Marine Hospital  
Savannah, Georgia

Andrew J. Darling  
Rochester General Hospital  
Rochester, New York

Kenneth B. Davis  
Veterans Administration Center  
White River Junction, Vermont

Sister Mary Jean Doerr  
St. Joseph Hospital  
Mt. Clemens, Michigan

Sister Marie G. Fox  
St. Thomas Hospital  
Nashville, Tennessee

Sister Stanislaus Franz  
St. Vincent Hospital  
Portland, Oregon

Eugene Friedman  
Mercer Hospital  
Trenton, New Jersey

Irvin Arthur Friesen  
Boulder Sanatorium & Hospital  
Boulder, Colorado

Sister Catherine Gardner  
St. Johns Hospital  
Lowell, Massachusetts

Arleigh H. Goodrich  
1916 American  
Baton Rouge, Louisiana

William H. Grau  
16 Biddle Avenue  
Wilkinsburg, Pennsylvania

Sister Mary Junilla-Haskell  
Queen of Angels Hospital  
Los Angeles, California

Frank J. Helbig  
Henry Ford Hospital  
Detroit, Michigan

Anson F. Hendrickson  
Rochester General Hospital  
Rochester, New York

Clara D. Herskowitz  
Baltimore City Hospital  
Baltimore 24, Maryland

Arthur A. Hoehn  
314 Grand Avenue  
Eau Claire, Wisconsin

Ivers D. Hooper  
3517 Devonshire Road  
Detroit, Michigan

Mary K. Keenan  
St. Mary's Hospital  
Duluth, Minnesota.

Lucy Lee Kennedy  
Duke Hospital Pharmacy  
Durham, North Carolina

Sam Kitabayashi  
Stanford University Hospital  
San Francisco, California

Milton Klepfish  
West Baltimore General Hospital  
Baltimore 16, Maryland



Mary Kulaja  
7850 E. Jefferson Avenue  
Detroit, Michigan

Alice Odian  
Suburban Hospital  
Bethesda, Maryland

Norman Sollenberger  
Temple University Hospital  
Philadelphia, Pennsylvania

R. Lager  
1585 Robinwood  
Lakewood, Ohio

Adelia Mae Pierce  
University Hospital  
Ann Arbor, Michigan

Dominic V. Spiutti  
Veterans Administration Hospital  
Rutland Heights, Massachusetts

Joanne Leist  
Louisville General Hospital  
Louisville, Kentucky

Mrs. Lillian Price  
Emory University Hospital  
Atlanta, Georgia

Sister M. St. Henry  
St. Joseph's Hospital  
Baltimore, Maryland

Blanche S. Leites  
Women's Hospital  
Baltimore 17, Maryland

David Puchkoff  
Veterans Hospital  
McKinney, Texas

Frank Floyd Stencil  
The Montefiore Hospital  
Pittsburg, Pennsylvania

Alfred H. Lerch  
5091 Haverhill Avenue  
Detroit Michigan

Dr. Arthur Purdum  
Johns Hopkins Hospital  
Baltimore 5, Maryland

John Svihra  
Perth Amboy General Hospital  
Rahway, New Jersey

William Levin  
Philadelphia General Hospital  
Philadelphia, Pennsylvania

Sister Mary de Chantel Reilly  
Mercy Hospital  
Johnstown, Pennsylvania

Sister M. Liguouri Thibodeau  
Mercy Hospital  
Manistee, Michigan

Lawrence T. Lyon  
408 Third Avenue West  
Flint, Michigan

Owen G. Rogers  
House of Mercy Hospital  
Pittsfield, Massachusetts

Stanley J. Thomas  
Merced,  
California

Sister M. Nathy McGetrick  
St. Joseph Infirmary  
Houston, Texas

H. Dale Roth  
2331 Cathedral Avenue, N.W.  
Washington, D.C.

Daniel D. Tonjec  
3736 Utah Street  
San Diego, California

James W. McGraw  
Mercy Hospital  
Redding, California

Francis M. Rudi  
3553 Crittenden St.  
St. Louis, Missouri

Charles Wagner  
Lutheran Hospital of Manhattan  
New York, N.Y.

Carl Mayo  
Temple University Hospital  
Philadelphia, Pennsylvania

Alanson LeRoy Salmans  
Harper Hospital  
Detroit, Michigan

George Nelson Wheeler  
Holzer Hospital  
Gallipolis, Ohio

Macy H. Meyers  
Siani Hosnital of Baltimore, Inc.  
Baltimore 5, Maryland

Nelson Schroeder  
6710 Meadow Brook  
Cleveland, Ohio

C. L. Wright  
6326 Neff Road  
Detroit, Michigan

Ruth Catherine Moote  
N. 131st St. & W. North Avenue  
Wauwatosa, Wisconsin

Sister M. Clotilde Schumann, S.S.M.  
St. Francis Hospital  
Wichita, Kansas

Walter G. Yarbrough  
Columbus City Hospital  
Columbus, Georgia

Irving M. Morris  
Union Memorial Hospital  
Baltimore 17, Maryland

John F. Sivy  
3774 Pingree  
Detroit 6, Michigan

Anthony F. Zak  
6641 Public Square  
Independence, Ohio

Sister Mary Adamar  
St. Joseph's Hospital  
Lancaster, Pennsylvania

Roy Franklin  
P.O. Box 284-3  
Hawthorne, Nevada

Lt. R. L. Posey HC-USN  
Bur of Med & Surgeon, Navy Dept.  
Washington, D. C.

Oscar W. Anderson  
Worcester City Hospital  
Worcester, Massachusetts

Ann P. Godley  
New York University Clinic  
New York, N.Y.

Alfred D. Schiff  
1015 Maple  
Des Moines, Iowa

Ruth E. Barnett  
Allentown Hospital  
Allentown, Pennsylvania

Leo F. Godley  
New York University College of Med.  
New York, N.Y.

Frank Charles Smolensky  
St. Joseph's Hospital  
Patterson, New Jersey

John A. Childress  
Chesnut Hospital  
Philadelphia, Pennsylvania

Boris A. Haykin  
94-18 Sutphin Blvd.  
Jamaica, Long Island, N.Y.

Basil J. Valenti  
Fairview Park Hospital  
Cleveland, Ohio

Lt. Leo Collins, P.C.  
9th Station Hospital, APO 1051  
San Francisco, California

Rose S. Lenga  
Women and Children's Hospital  
Toledo, Ohio

Michael Vamvas  
Worcester State Hospital  
Worcester, Massachusetts

John J. Dugan  
172 Lawncrest Road  
New Haven, Connecticut

S. W. Morrison  
Wesley Hospital  
Chicago, Illinois

Edward C. Watts  
St. Luke's Hospital  
New York, N.Y.

Russel H. Fiske  
Medical College of Virginia  
Richmond, Virginia

Hubert G. Price  
Rex Hospital  
Raleigh, North Carolina

Herbert Wright  
Crouse-Irvin Hospital  
Syracuse, New York

Herbert Flack  
57 North Oak Avenue  
Pitman, New Jersey

Belle H. Moskowitz  
Children's Hospital  
Detroit, Michigan

Mrs. R. J. Zola  
15 Winslow Road  
Brookline, Massachusetts